Abstract of the Disclosure

This invention provides a signal processing and signal synthesis technique from a family of signal processing and signal synthesis techniques designed to readily interwork or be used individually in creating new forms of rich musical timbres. A plurality of audio signal delays, each with high resonance positive feedback, distortion characteristics, and selectable delay times corresponding to a desired resonant frequency, provide twang and resonance synthesis for moments of sparkle or vibrantly-responsive ongoing backdrops. The selectable delay times may match a musical scale or other resonant frequency distribution. Delay, feedback, and signal processing characteristics and parameters may be recalled from stored program control or modulated in real-time by arbitrary control signals, including those derived from the original input signal. The invention may be used individually or in conjunction with other signal processing and signal synthesis techniques in creating new forms of rich musical timbres. The invention may also be used in spatially-distributed timbre construction.